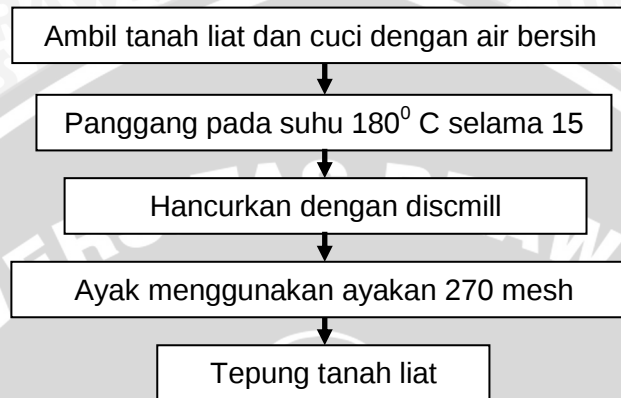


LAMPIRAN

Lampiran 1. Diagram Pembuatan Tepung Tanah Liat



Gambar Pembuatan Tepung Tanah Liat

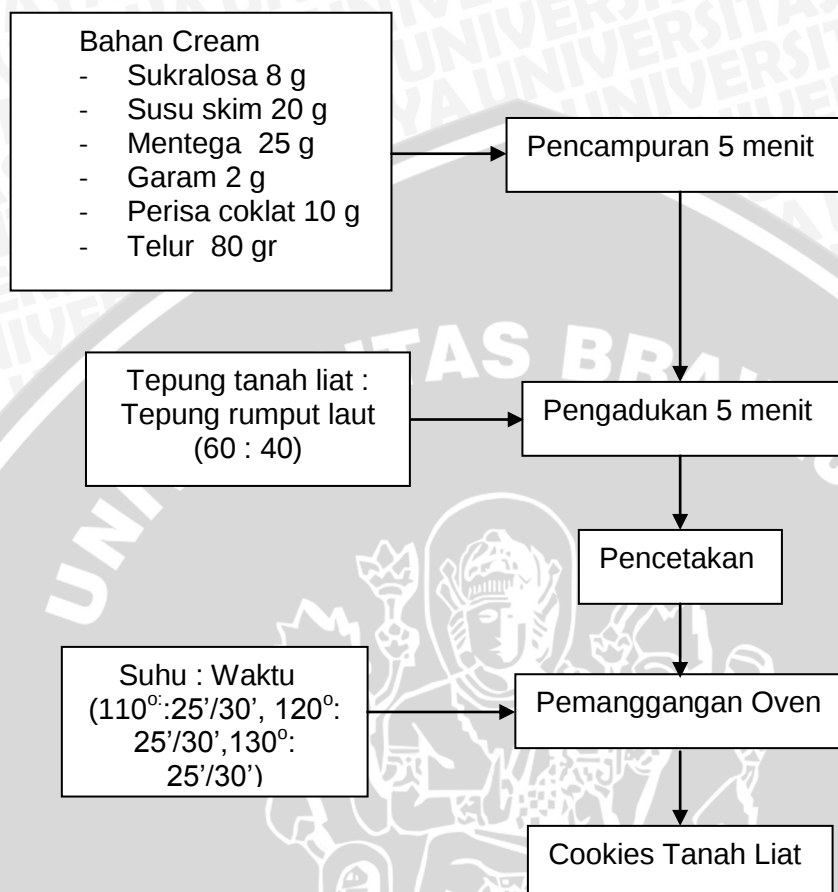


Lampiran 2. Diagram Pembuatan Tepung Rumpot Laut (*Kappaphycus alvarezii*)



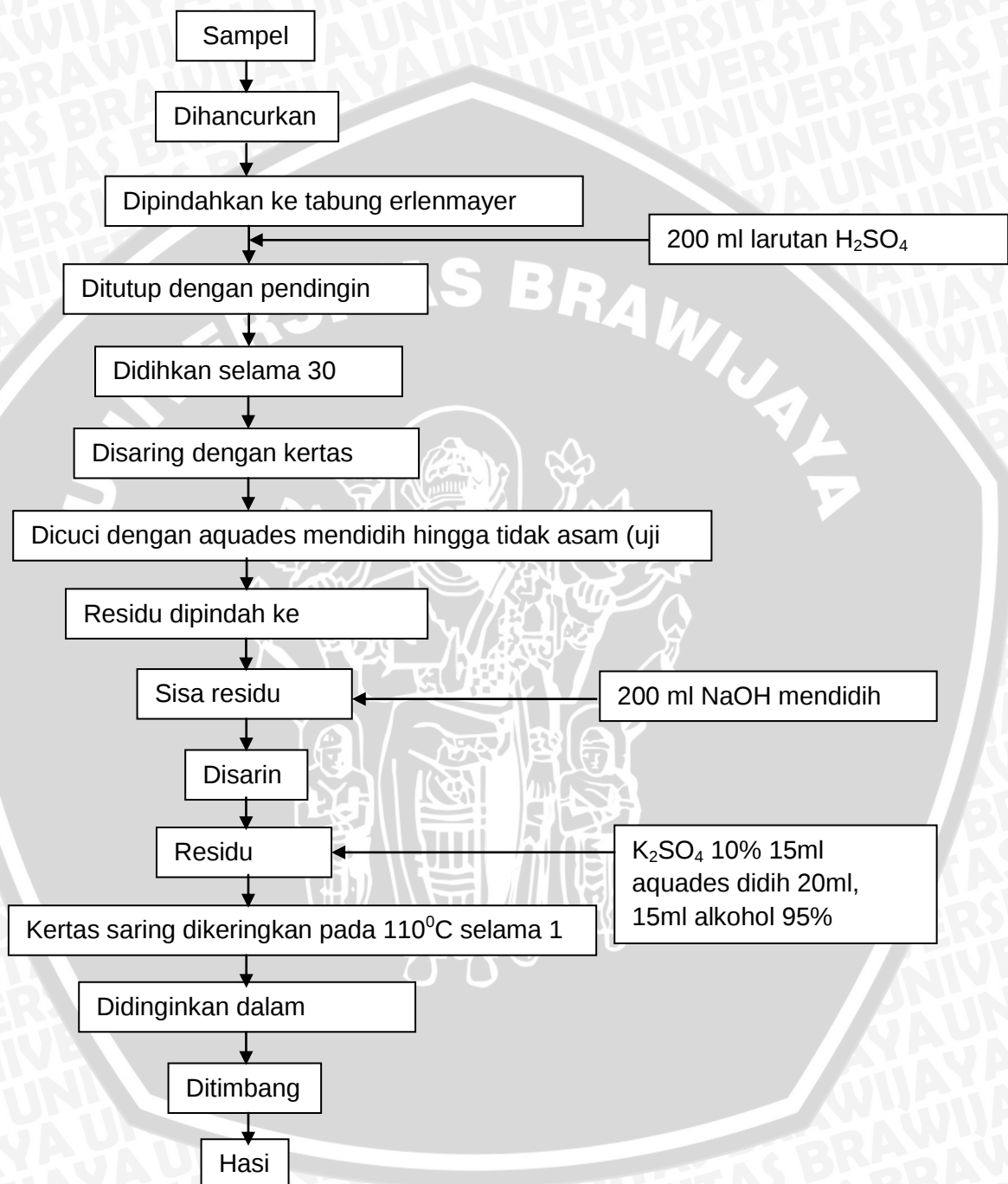
Gambar Pembuatan Tepung Rumpot Laut Merah (*Kappaphycus alvarezii*)

Lampiran 3. Proses Pembuatan Cookies Tanah Liat dan Rumput Laut



Gambar Proses Pembuatan Cookies

Lampiran 4. Pengujian Serat Kasar



Gambar Proses Pengujian Serat Kasar

Lampiran 5. Hasil Uji Taksonomi Rumput Laut

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LABORATORIUM TAKSONOMI, STRUKTUR DAN
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KETERANGAN IDENTIFIKASI

No. 0076/Takso.Identifikasi/03/2013

Kepala Laboratorium Taksonomi, Struktur dan Perkembangan Tumbuhan, Jurusan Biologi, Fakultas MIPA, Universitas Brawijaya, menerangkan bahwa spesimen yang dibawa oleh:

Nama : Khunto Ajie Wijoyo (NIM. 0910733027)
Instansi : Gizi, Fakultas Kedokteran, Universitas Brawijaya

Berdasarkan deskripsi karakter dan kunci identifikasi pada Plant Resource of South East Asia. 15. Cryptogams: Algae. Prosea Foundation Bogor (W.F.P. von Reine & G.C. Trono, tahun 2002), halaman 150-153 diidentifikasi sebagai:

Familia : Solieraceae
Genus : *Eucheuma*
Species : *Eucheuma cottonii*

Demikian surat keterangan identifikasi ini dibuat untuk digunakan seperlunya.

Malang, 4 Maret 2013

Kepala Laboratorium
Taksonomi, Struktur dan
Perkembangan Tumbuhan,

Dr. Serafinus Hidayati, M.Si.
NIP. 19630909 198802 2 001

Gambar Hasil Uji Taksonomi Rumput Laut

Lampiran 6. Dokumentasi Rangkaian Kegiatan Penelitian

Tanah Liat



Rumput Laut Merah



Bahan Pembuatan Cookies
Sukralosa



Susu Skim



Perisa Coklat



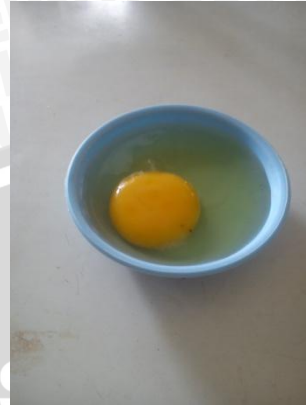
Garam



Tepung Rumput Laut



Telur



Proses Pembuatan Cookies
Pengayakan Tanah Liat



Hasil Ayakan Dioven



Tanah Liat Setelah Dioven



Kemudian Dihancurkan Sampai Halus



Setelah Halus di Ayak



Kemudian Disangrai



Proses Pembuatan Adonan
Mentega dan Telur Dicampurkan



Mencampurkan Seluruh Bahan



Adonan Dicetak Dalam Loyang



Cetakan Dioven



Lampiran 7. Dokumentasi Cookies 6 Perlakuan

P1



P2



P3



P4



P5



P6



Lampiran 8. Hasil Analisis

Jenis Sampel (Sample Name)	No. Rujukan (Reference Number)	Jenis Uji (Analysis)	Hasil Analisa (Analysis Result)		Metode Analisis (Analysis Method)
			Nilai (Value)	Satuan (Unit)	
Cookies Tanah Liat P1-R1	226/S-UJ/LSIH-UB/III/2013	Kadar Protein	10.27	%	Inhouse method (IKP/1.0.4.03/LSIH)
			10.67	%	
		Kadar Lemak	14.16	%	SNI 01-2891-1992 Butir 8.1
			14.56	%	
		Kadar Air	10.67	%	SNI 01-2891-1992 Butir 5.1
			10.62	%	
		Kadar Abu	32.44	%	SNI 01-2891-1992 Butir 6.1
			32.50	%	
		Karbohidrat (by different)	32.08	%	Karbohidrat (by different)
			32.04	%	
		Serat Kasar	4.42	%	Gravimetri
			5.22	%	
Cookies Tanah Liat P1-R2	227/S-UJ/LSIH-UB/III/2013	Kadar Protein	10.14	%	Inhouse method (IKP/1.0.4.03/LSIH)
			10.54	%	
		Kadar Lemak	14.12	%	SNI 01-2891-1992 Butir 8.1
			14.52	%	
		Kadar Air	11.36	%	SNI 01-2891-1992 Butir 5.1
			11.37	%	
		Kadar Abu	31.54	%	SNI 01-2891-1992 Butir 6.1
			31.64	%	
		Karbohidrat (by different)	31.80	%	Karbohidrat (by different)
			32.20	%	
		Serat Kasar	5.83	%	Gravimetri
			6.23	%	
Cookies Tanah Liat P2-R1	228/S-UJ/LSIH-UB/III/2013	Kadar Protein	10.04	%	Inhouse method (IKP/1.0.4.03/LSIH)
			10.64	%	
		Kadar Lemak	14.30	%	SNI 01-2891-1992 Butir 8.1
			14.70	%	
		Kadar Air	3.38	%	SNI 01-2891-1992 Butir 5.1
			3.21	%	
		Kadar Abu	33.44	%	SNI 01-2891-1992 Butir 6.1
			33.22	%	
		Karbohidrat (by different)	32.24	%	Karbohidrat (by different)
			32.28	%	
		Serat Kasar	4.33	%	Gravimetri
			5.13	%	
Cookies	229/S-	Kadar	10.13	%	Inhouse method

Tanah Liat P2-R2	UJ/LSIH-UB/III/2013	Protein	10.53	%	(IKP/1.0.4.03/LSIH)
		Kadar Lemak	14.28	%	SNI 01-2891-1992 Butir 8.1
			14.68	%	
		Kadar Air	9.60	%	SNI 01-2891-1992 Butir 5.1
			9.64	%	
		Kadar Abu	31.40	%	SNI 01-2891-1992 Butir 6.1
			31.57	%	
		Karbohidrat (by different)	32.10	%	Karbohidrat (by different)
			32.26	%	
Cookies Tanah Liat P3-R1	230/S-UJ/LSIH-UB/III/2013	Kadar Protein	3.59	%	Gravimetri
			3.99	%	
		Kadar Protein	10.91	%	Inhouse method (IKP/1.0.4.03/LSIH)
			11.31	%	
		Kadar Lemak	16.12	%	SNI 01-2891-1992 Butir 8.1
			16.52	%	
		Kadar Air	2.15	%	SNI 01-2891-1992 Butir 5.1
			2.28	%	
Cookies Tanah Liat P3-R2	231/S-UJ/LSIH-UB/III/2013	Kadar Abu	34.04	%	SNI 01-2891-1992 Butir 6.1
			34.42	%	
		Karbohidrat (by different)	35.35	%	Karbohidrat (by different)
			36.15	%	
		Serat Kasar	4.25	%	Gravimetri
			4.05	%	
		Kadar Protein	10.84	%	Inhouse method (IKP/1.0.4.03/LSIH)
			11.24	%	
Cookies Tanah Liat P3-R2	231/S-UJ/LSIH-UB/III/2013	Kadar Lemak	16.15	%	SNI 01-2891-1992 Butir 8.1
			16.55	%	
		Kadar Air	3.93	%	SNI 01-2891-1992 Butir 5.1
			3.94	%	
		Kadar Abu	33.02	%	SNI 01-2891-1992 Butir 6.1
			33.44	%	
		Karbohidrat (by different)	36.00	%	Karbohidrat (by different)
			36.36	%	
Cookies Tanah Liat P3-R2	231/S-UJ/LSIH-UB/III/2013	Serat Kasar	5.11	%	Gravimetri
			5.71	%	

Jenis Sampel (Sample Name)	No. Rujukan (Reference Number)	Jenis Uji (Analysis)	Hasil Analisa (Analysis Result)		Metode Analisis (Analysis Method)
			Nilai (Value)	Satuan (Unit)	
Cookies Tanah Liat P4-R1	232/S-UJ/LSIH-UB/III/2013	Kadar Protein	10.01	%	Inhouse method (IKP/1.0.4.03/LSIH)
			10.41	%	
		Kadar Lemak	15.15	%	SNI 01-2891-1992 Butir 8.1
			15.55	%	
		Kadar Air	5.96	%	SNI 01-2891-1992 Butir 5.1
			6.06	%	
		Kadar Abu	40.53	%	SNI 01-2891-1992 Butir 6.1
			40.47	%	
		Karbohidrat (by different)	33.04	%	Karbohidrat (by different)
			33.84	%	
Cookies Tanah Liat P4-R2	233/S-UJ/LSIH-UB/III/2013	Kadar Protein	10.11	%	Inhouse method (IKP/1.0.4.03/LSIH)
			10.51	%	
		Kadar Lemak	15.51	%	SNI 01-2891-1992 Butir 8.1
			15.91	%	
		Kadar Air	2.43	%	SNI 01-2891-1992 Butir 5.1
			2.53	%	
		Kadar Abu	41.12	%	SNI 01-2891-1992 Butir 6.1
			41.16	%	
		Karbohidrat (by different)	32.47	%	Karbohidrat (by different)
			33.07	%	
Cookies Tanah Liat P5-R1	234/S-UJ/LSIH-UB/III/2013	Kadar Protein	10.71	%	Inhouse method (IKP/1.0.4.03/LSIH)
			11.11	%	
		Kadar Lemak	16.02	%	SNI 01-2891-1992 Butir 8.1
			16.42	%	
		Kadar Air	5.83	%	SNI 01-2891-1992 Butir 5.1
			5.71	%	
		Kadar Abu	39.84	%	SNI 01-2891-1992 Butir 6.1
			39.83	%	
		Karbohidrat (by different)	36.28	%	Karbohidrat (by different)
			37.08	%	
		Serat Kasar	4.91	%	Gravimetri
			5.32	%	

Jenis Sampel (Sample Name)	No. Rujukan (Reference Number)	Jenis Uji (Analysis)	Hasil Analisa (Analysis Result)		Metode Analisis (Analysis Method)
			Nilai (Value)	Satuan (Unit)	
Cookies Tanah Liat P5-R2	235/S-UJ/LSIH-UB/III/2013	Kadar Protein	10.81	%	Inhouse method (IKP/1.0.4.03/LSIH)
			11.21	%	
		Kadar Lemak	16.28	%	SNI 01-2891-1992 Butir 8.1
			16.68	%	
		Kadar Air	4.61	%	SNI 01-2891-1992 Butir 5.1
			4.51	%	
		Kadar Abu	40.53	%	SNI 01-2891-1992 Butir 6.1
			40.47	%	
		Karbohidrat (by different)	35.71	%	Karbohidrat (by different)
			35.91	%	
		Serat Kasar	5.01	%	Gravimetri
			5.21	%	
Cookies Tanah Liat P6-R1	236/S-UJ/LSIH-UB/III/2013	Kadar Protein	10.42	%	Inhouse method (IKP/1.0.4.03/LSIH)
			10.82	%	
		Kadar Lemak	16.14	%	SNI 01-2891-1992 Butir 8.1
			16.54	%	
		Kadar Air	5.83	%	SNI 01-2891-1992 Butir 5.1
			5.71	%	
		Kadar Abu	41.12	%	SNI 01-2891-1992 Butir 6.1
			41.16	%	
		Karbohidrat (by different)	36.02	%	Karbohidrat (by different)
			36.16	%	
		Serat Kasar	6.00	%	Gravimetri
			6.10	%	
Cookies Tanah Liat P6-R2	237/S-UJ/LSIH-UB/III/2013	Kadar Protein	10.32	%	Inhouse method (IKP/1.0.4.03/LSIH)
			10.92	%	
		Kadar Lemak	16.20	%	SNI 01-2891-1992 Butir 8.1
			16.60	%	
		Kadar Air	2.43	%	SNI 01-2891-1992 Butir 5.1
			2.53	%	
		Kadar Abu	39.84	%	SNI 01-2891-1992 Butir 6.1
			39.83	%	
		Karbohidrat (by different)	35.40	%	Karbohidrat (by different)
			35.80	%	
		Serat Kasar	6.71	%	Gravimetri
			7.11	%	

Lampiran 9. Uji Normalitas Kadar Karbohidrat

Tests of Normality

perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
kadar_karbohidrat 110,25	.274	4	.	.939	4	.650
110,30	.347	4	.	.807	4	.115
120,25	.282	4	.	.908	4	.470
120,30	.275	4	.	.944	4	.680
130,25	.227	4	.	.917	4	.522
130,30	.201	4	.	.947	4	.697

a. Lilliefors Significance Correction

perlakuan	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
kadar_karbohidrat 110,25	4	100.0%	0	.0%	4	100.0%
110,30	4	100.0%	0	.0%	4	100.0%
120,25	4	100.0%	0	.0%	4	100.0%
120,30	4	100.0%	0	.0%	4	100.0%
130,25	4	100.0%	0	.0%	4	100.0%
130,30	4	100.0%	0	.0%	4	100.0%

Lampiran 10. Uji Homogenitas Kadar Karbohidrat

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
kadar_karbohidrat	Based on Mean	1.424	5	18	.263
	Based on Median	1.132	5	18	.379
	Based on Median and with adjusted df	1.132	5	10.841	.400
	Based on trimmed mean	1.387	5	18	.276

Case Processing Summary

		Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
kadar_karbohidrat	110,25	4	100.0%	0	.0%	4	100.0%
	110,30	4	100.0%	0	.0%	4	100.0%
	120,25	4	100.0%	0	.0%	4	100.0%
	120,30	4	100.0%	0	.0%	4	100.0%
	130,25	4	100.0%	0	.0%	4	100.0%
	130,30	4	100.0%	0	.0%	4	100.0%

Lampiran 11. Uji One Way ANOVA dan Post Hoc Tukey (Karbohidrat)

ANOVA

kadar_karbohidrat

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	79.297	5	15.859	93.603	.000
Within Groups	3.050	18	.169		
Total	82.347	23			

Multiple Comparisons

kadar_karbohidrat

Tukey HSD

(I)	(J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
110,25	110,30	-.19000	.29106	.985	-1.1150	.7350
	120,25	-3.93500*	.29106	.000	-4.8600	-3.0100
	120,30	-1.07500*	.29106	.018	-2.0000	-.1500
	130,25	-4.21500*	.29106	.000	-5.1400	-3.2900
	130,30	-3.81500*	.29106	.000	-4.7400	-2.8900
110,30	110,25	.19000	.29106	.985	-.7350	1.1150
	120,25	-3.74500*	.29106	.000	-4.6700	-2.8200
	120,30	-.88500	.29106	.065	-1.8100	.0400
	130,25	-4.02500*	.29106	.000	-4.9500	-3.1000
	130,30	-3.62500*	.29106	.000	-4.5500	-2.7000
120,25	110,25	3.93500*	.29106	.000	3.0100	4.8600
	110,30	3.74500*	.29106	.000	2.8200	4.6700
	120,30	2.86000*	.29106	.000	1.9350	3.7850
	130,25	-.28000	.29106	.924	-1.2050	.6450
	130,30	.12000	.29106	.998	-.8050	1.0450
120,30	110,25	1.07500*	.29106	.018	.1500	2.0000
	110,30	.88500	.29106	.065	-.0400	1.8100

	120,25	-2.86000*	.29106	.000	-3.7850	-1.9350
	130,25	-3.14000*	.29106	.000	-4.0650	-2.2150
	130,30	-2.74000*	.29106	.000	-3.6650	-1.8150
130,25	110,25	4.21500*	.29106	.000	3.2900	5.1400
	110,30	4.02500*	.29106	.000	3.1000	4.9500
	120,25	.28000	.29106	.924	-.6450	1.2050
	120,30	3.14000*	.29106	.000	2.2150	4.0650
	130,30	.40000	.29106	.741	-.5250	1.3250
130,30	110,25	3.81500*	.29106	.000	2.8900	4.7400
	110,30	3.62500*	.29106	.000	2.7000	4.5500
	120,25	-.12000	.29106	.998	-1.0450	.8050
	120,30	2.74000*	.29106	.000	1.8150	3.6650
	130,25	-.40000	.29106	.741	-1.3250	.5250

*. The mean difference is significant at the 0.05 level.

kadar_karbohidrat

Tukey HSD

perlakuan	N	Subset for alpha = 0.05		
		1	2	3
110,25	4	32.0300		
110,30	4	32.2200	32.2200	
120,30	4		33.1050	
130,30	4			35.8450
120,25	4			35.9650
130,25	4			36.2450
Sig.		.985	.065	.741

Means for groups in homogeneous subsets are displayed.

Lampiran 12. Uji Normalitas Kadar Serat Kasar

Tests of Normality							
		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
kadar_serat_kasar	110,25	.196	4	.	.971	4	.848
	110,30	.207	4	.	.968	4	.832
	120,25	.254	4	.	.922	4	.549
	120,30	.301	4	.	.819	4	.141
	130,25	.209	4	.	.954	4	.739
	130,30	.269	4	.	.877	4	.325

a. Lilliefors Significance Correction

Case Processing Summary							
		Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
kadar_serat_kasar	110,25	4	100.0%	0	.0%	4	100.0%
	110,30	4	100.0%	0	.0%	4	100.0%
	120,25	4	100.0%	0	.0%	4	100.0%
	120,30	4	100.0%	0	.0%	4	100.0%
	130,25	4	100.0%	0	.0%	4	100.0%
	130,30	4	100.0%	0	.0%	4	100.0%

Lampiran 13. Uji Homogenitas Kadar Serat Kasar

Test of Homogeneity of Variance					
		Levene Statistic	df1	df2	Sig.
kadar_serat_kasar	Based on Mean	1.874	5	18	.149
	Based on Median	1.649	5	18	.198
	Based on Median and with adjusted df	1.649	5	10.587	.230
	Based on trimmed mean	1.871	5	18	.150



Lampiran 14. Uji One Way ANOVA dan Post Hoc Tukey (Serat Kasar)

ANOVA

kadar_serat_kasar

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	11.575	5	2.315	6.223	.002
Within Groups	6.696	18	.372		
Total	18.271	23			

kadar_serat_kasar

Tukey HSD

perlakuan	N	Subset for alpha = 0.05	
		1	2
110,30	4	4.2600	
120,25	4	4.7800	
120,30	4	4.8050	
130,25	4	5.1125	5.1125
110,25	4	5.4250	5.4250
130,30	4		6.4800
Sig.		.124	.051

